WHAT IS CLAIMED IS:

1. A device, comprising;

a FP (Fabre-Perot) interferometer comprising a top plate, a bottom plate, and a resonant cavity defined between the top plate and the bottom plate wherein the top plate is suspended with respect to the bottom plate so that the top plate is relatively movable with respect to the bottom plate;

a first electromechanical transducer which is associated with the top and bottom plates and which induces a first relative displacement between the top and bottom plates, when energized; and

a second electromechanical transducer which is associated with the bottom plate and which induces a second relative displacement which is substantially independent of the first relative displacement, when energized.

2. The device as defined in claim 1, wherein the device is a DLD (diffractive light device) MEMS (microelectromechanical system) device.

3. The device as defined in claim 1, wherein the first electromechanical transducer comprises a linear acting motor wherein the top and bottom plates respectively act as first and second electrodes of a capacitor between which an electrostatic force is developed.

4. The device as defined in claim 1, wherein the second electromechanical transducer comprises a piezo-electric element.

5. The device as defined in claim 4, wherein the piezo-electric element comprises one layer.

6. The device as defined in claim 4, wherein the piezo-electric element comprises multiple layers.

7. The device as defined in claim 4, wherein the piezo-electric element comprises zinc oxide.

8. The device as defined in claim 1, further comprises a bottom conductive plate which respectively supports and provides an electrical connection for the piezo-electric element.

9. The device as defined in claim 4, wherein the piezo-electric element is disposed between the bottom plate of the FP interferometer and the bottom conductive plate.

10. The device as defined in claim 1, wherein the top plate of the FP interferometer is supported by flexures.

11. The device as defined in claim 1, wherein the top plate is semi-transparent and the bottom plate is reflective.

12. The device as defined in claim 1, further comprising a circuit which controls the first and second electromechanical transducers.

13. The device as defined in claim 12, wherein the circuit comprises;

a first voltage source connected across the top and bottom plates for variably supplying a voltage there across; and

a second voltage source connected across the bottom and bottom conductive plates for variably supplying a voltage there across.

14. A method of tuning a resonant cavity of an FP (Fabre-Perot) interferometer in a DLD (diffractive light device) MEMS (microelectromechanical system) device, wherein the FP interferometer has a top plate and a bottom plate, and wherein the method comprises;

using first and second electromechanical transducers to change distance between the top and bottom plates of the FP interferometer.

15. The method as defined in claim 14, wherein the step of changing the distance between the top and bottom plates of the FP interferometer comprises;

inducing a first relative displacement between the top and bottom plates using the first electromechanical transducer, when energized; and

inducing a second relative displacement which is substantially independent of the first

relative displacement using the second electromechanical transducer, when energized.

16. The method as defined in claim 14, wherein the step of changing the distance between the top and bottom plates of the FP interferometer comprises;

locating the second electromechanical transducer below the bottom plate of the FP interferometer; and

energizing the second electromechanical transducer with a modulating voltage.

17. The method as defined in claim 16, wherein the first electromechanical transducer comprises a linear acting motor wherein the top and bottom plates respectively act as first and second electrodes of a capacitor between which an electrostatic force is developed.

18. The method as defined in claim 16, wherein the second electromechanical transducer comprises a piezo-electric element.

19. The method as defined in claim 14, wherein the step of changing the distance between the top and bottom plates of the FP interferometer further comprising;

controlling a top plate voltage for achieving a first stage adjustment; and

controlling a bottom conductive plate voltage for achieving a second stage adjustment.

20. The method as defined in claim 19, wherein the first stage adjustment comprises a coarse gap modulation and the second stage adjustment comprises a fine gap modulation.

21. An apparatus for fine tuning a resonant cavity of an FP (Fabre-Perot) interferometer in a DLD (diffractive light device) MEMS (microelectromechanical system) device, comprising;

FP interferometer means including a top plate and a bottom plate; and

first and second electromechanical transducer means for individually changing a distance between the top and bottom plates of the FP interferometer.

22. The apparatus as defined in claim 21, wherein the first and second electromechanical transducer means for changing the distance between the top and bottom plates of the FP interferometer respectively comprise;

linear acting motor means for inducing a first relative displacement between the top and bottom plates, when energized; and

reaction means for inducing a second relative displacement which is independent of the first relative displacement, when energized.

23. The apparatus as defined in claim 22, wherein the linear acting motor comprises means for applying a voltage to the top and bottom plates respectively so that the top and bottom plates act as first and second electrodes of a capacitor between which an electrostatic force is developed.

24. The apparatus as defined in claim 22, wherein the reaction means comprises;

piezo-electric element means disposed below the bottom plate of the FP interferometer; and

means for energizing the piezo-electric element with a modulating voltage.